

**REMARKS**

Claims 1-16 are all the claims pending in the application. By this amendment, claims 1 and 4-6 are amended in a manner that is not believed to be narrowing, and solely for the purpose of overcoming the Examiner's objection. In view of the foregoing amendments and following remarks, allowance of the application and withdrawal of the rejections and objection are respectfully requested.

**I. Objections**

The Examiner objects to claims 4-6 due to the presence of an extra "switching" in the claim. As shown in the foregoing amendment, applicant has amended claims 4-6 to overcome this typographical error.

The Examiner also objects to claim 16 as being allegedly inconsistent with claim 1. However, claim 1 recites "at most" N dividers in the first instance, and the recitation of the dividers in claim 1 is thus believed to include "N or less" dividers, and claim 16 is thus not believed to be in conflict with claim 1. To further clarify the scope of claim 1, applicant has amended claim 1 for the purposes of clarity and precision.

Thus, applicant respectfully requests withdrawal of the objections.

**II. Allowable Subject Matter**

The Examiner has indicated that claims 5-9 and 13-15 contain allowable subject matter, and would be allowed if rewritten in independent form. Additionally, the Examiner has indicated on the Office Action Summary that claim 16 is also allowable (and has also not made any prior

art rejection of claim 16). Applicant thanks the Examiner for the indication of allowable subject matter in these claims.

**III. Claims 1-4, 10 and 11 are not anticipated**

Claims 1-4, 10 and 11 stand rejected under 35 USC 102(b) due to alleged anticipation by Shiragaki et al. (USP 6115517), and claims 1-4 and 11 stand rejected under 35 USC 102(e) due to alleged anticipation by Doerr (USP 6532090). Applicant respectfully submits that the foregoing claims fail to disclose all of the claimed combinations of features, and thus requests withdrawal of the rejections and allowance of the claims. Each of these anticipation rejections is separately addressed below.

**A. Doerr**

As shown in the foregoing amendments, claim 1 is amended to further clarify the destination of the input signals to the output ports. Applicant respectfully submits that Doerr fails to disclose “*wherein said space cross-connect unit is adapted to provide broadcasting of input signals to said output ports (S<sub>i</sub>) independently of spectral considerations*”, as recited in independent claim 1.

Therefore, applicant respectfully requests withdrawal of the rejection of claim 1 under 35 USC 102 in view of Doerr, as well as the rejection of claims 2-4 and 11 in view of Doerr by virtue of their dependencies from independent claim 1.

**B. Shiragaki**

Applicant respectfully submits that Shiragaki fails to disclose all of the features recited in claims 1-4, 10 and 11, for at least the reasons discussed below.

The present application is directed to a cross-connect unit for optical signals, and is configured to be used for packet switching as well as circuit switching. Further, broadcasting of the input signals to the outputs is performed independently from spectral considerations.

First, applicant respectfully maintains that Shiragaki fails to disclose that it is configured to be used in packet switching as well as circuit switching, as recited in independent claim 1. In the Office Action at page 3 and at page 6, the Examiner maintains his position, and further asserts that it is inherent that Shiragaki can be used for packet switching and circuit switching operations. In view of the requirements MPEP 2112 and the controlling case law of *In re Oelrich*, 666 F.2d 578, 581-82, 212 USPQ 323, 326 (CCPA 1981), *Metabolite Labs., Inc. v. Lab. Corp. of Am. Holdings*, 370 F.3d 1354, 1367, 71 USPQ2d 1081, 1091 (Fed. Cir. 2004), and *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990), applicant respectfully submits that the Examiner has failed to provide the rationale or evidence showing inherency. Accordingly, applicant respectfully requests that the Examiner either demonstrate the required showing, or withdraw the rejection and allow independent claim 1.

Second, applicant respectfully maintains that Shiragaki fails to disclose or even suggest that *the space cross-connect unit is adapted to provide broadcasting of input signals independently of spectral considerations*, as recited in independent claim 1. As explained in the previous response, Shiragaki requires wavelength selectors as described at col. 11 lines 8-10 and lines 43-50 and shown in figure 5. Applicant respectfully submits that Shiragaki teaches units which have similar drawbacks as those discussed on page 2 lines 26-34 of the description in relation to the related art techniques.

Third, applicant respectfully maintains that the claimed output ports are distinguishable from the prior art, because the recited relationship between number P and number C, where C is less than P, is not disclosed or even suggested in the cited prior art. For example, but not by way of limitation, applicant respectfully submits that the Examiner has improperly characterized C as including multiple elements 521, 531 based on the number of wavelength converters 561. Thus, the number of space switching modules in Shiragaki is undercounted. Applicant respectfully submits that in the cited prior art, P is equal to C, which is clearly distinguishable from *a broadcast stage comprising at most N signal dividers (A<sub>j</sub>) each having one input and C outputs where C is an integer factor of P less than P*, as recited in claim 1. Also, while the Examiner has changed his characterization of the “SCCU” of Shiragaki as compared with the previous Office Action, applicant respectfully submits that this new characterization is also improper.

Dependent claims 2-4, 10 and 11 depend from independent claim 1. Applicant respectfully submits that these dependent claims are allowable for at least the same reasons as discussed above with respect to independent claim 1.

Accordingly, applicant respectfully requests withdrawal of the rejections, and allowance of the claims.

#### **IV. Claim 12 would not have been obvious**

Claim 12 stands rejected due to alleged obviousness under 35 USC 103(a) based on above-cited Shiragaki. Applicant respectfully submits that claim 12 is allowable at least due to its dependency from claim 1, which is believed to be allowable for at least the reasons explained

above. Thus, applicant respectfully requests withdrawal of the rejection of claim 12, and allowance thereof.

Additionally, applicant respectfully requests that the Examiner provide a basis for the inherency assertion in claim 12, for similar reasons to those explained above with respect to the discussion of independent claim 1.

**V. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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